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TRW Docket No. 12-1101

Q3 capacitors  $C_{co}$ ,  $C_{cp}$  may be used to couple the carrier and peak amplifiers 22 and 24 to the Lange coupler 32.

Please amend paragraph [0023] on page 5 as follows:

Q4 [0023] The biasing circuits, for example, the biasing circuits 48 and 50, enable one or the other or both the carrier amplifier 22 and peak amplifier to be electronically turned. In the case of the exemplary biasing circuits 48 and 50, illustrated in FIGs. 6A and 6B, respectively, the biasing of the carrier and peak amplifiers 22 and 24 may be varied by varying the amplitude of the external DC voltage  $V_{bc}$ ,  $V_{bp}$  coupled to the input of the carrier and peak amplifiers 22 and 24.

#### IN THE CLAIMS:

Please cancel claim 7. Please amend claims 1-3, 5, 6, 8-12 and 14-16 as follows:

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- Q5
1. (Amended) A predistortion circuit for a power amplifier, the predistortion circuit comprising:  
a Doherty power amplifier having a carrier amplifier and a peak amplifier, each amplifier having a respective bias level, the bias levels for said Doherty power amplifier selected to provide for predistortion of predetermined characteristics of an RF signal, the bias levels further selected to precompensate for distortion of said RF signal by an upstream serially connected power amplifier.
  2. (Amended) The predistortion circuit as recited in claim 1, wherein one of said predetermined characteristics of the RF signal is gain as a function of input power level.
  3. (Amended) The predistortion circuit as recited in claim 2, wherein the bias levels are selected to provide gain expansion as a function of input power.

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24  
B1

5. (Amended) The predistortion circuit as recited in claim 4, wherein the bias levels are selected to provide phase compression as a function of input power level.

6. (Amended) A linear power amplifier circuit comprising:  
a power amplifier having predetermined characteristics including input power range as a function of RF input power; and  
an upstream predistortion circuit configured as a Doherty amplifier serially coupled to said power amplifier having characteristics selected to precompensate for said predetermined characteristics of said power amplifier as a function of input power.

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8. (Amended) The linear power amplifier circuit as recited in claim 6, wherein said power amplifier is configured as a Doherty amplifier having a predetermined gain compression characteristic as a function of input power.

9. (Amended) The linear power amplifier circuit as recited in claim 6, wherein said upstream predistortion circuit is configured to have a gain expansion characteristic such that the output gain of the circuit is relatively linear over the input power range of the power amplifier.

10. (Amended) The linear power amplifier circuit as recited in claim 6, wherein the power amplifier is configured as a Doherty amplifier having a predetermined phase compression characteristic as a function of input power.

11. (Amended) The linear power amplifier circuit as recited in claim 10, wherein said upstream predistortion circuit is configured to have a phase expansion characteristic such that the output gain of the circuit is relatively linear over the input range of the power amplifier.

12. (Amended) A linear power amplifier circuit comprising:  
a power amplifier having predetermined characteristics including an input power range as a function of RF input power;

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an upstream predistortion circuit for precompensating said predetermined characteristics of said power amplifier; and

means for electronically tuning said upstream predistortion circuit so that a predetermined characteristic of the linear power amplifier circuit is linear over the input power range of the power amplifier.

14. (Amended) The linear power amplifier circuit as recited in claim 12, wherein said predetermined characteristic is the output gain of the linear power amplifier circuit wherein said tuning means enables said output gain to be adjusted so that the output gain is relatively linear over the input range of the power amplifier.

15. (Amended) The linear power amplifier circuit as recited in claim 12, wherein power amplifier is configured as a Doherty amplifier having a predetermined phase compression characteristic as a function of input power.

16. (Amended) The linear power amplifier circuit as recited in claim 15, wherein said tuning means includes means for electronically tuning the predistortion circuit such that the output phase characteristic of the linear power amplifier circuit is relatively linear over the input range of the power amplifier.